Inductive Speed Sensor IA

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BOSCH
Invented for life

- Crankshaft or wheel speed
- 32.2 mm depth/lead
- Bore diameter 12.5 mm
- Max. operating temperature 230°C

This sensor is designed for incremental measurement of rotational speed (e.g. crankshaft or wheel speed). The inductive sensor consists of a bar magnet with a soft magnetic pole pin supporting an induction coil with two connections. Every time a ferromagnetic ring gear turns past this sensor, it generates a voltage in the coil which is directly proportional to the periodic variation in the magnetic flux. The rotational speed is reflected on a periodic interval between the voltage's zero transition points.
The main benefit of this sensor is the combination of a high quality production part and robust, high temperature resistance. Additionally the installation depth can be changed according to the customer request.

Application

Application	Speed
Max. frequency	≤ 15 kHz
Target wheel air gap AG	0.8 ± 0.3 mm
Operating temp. range (sensing head)	-40 to 230°C
Storage temperature range	0 to 100°C
Max. vibration	800 m/s² max. 80 h

Technical Specifications

Mechanical Data

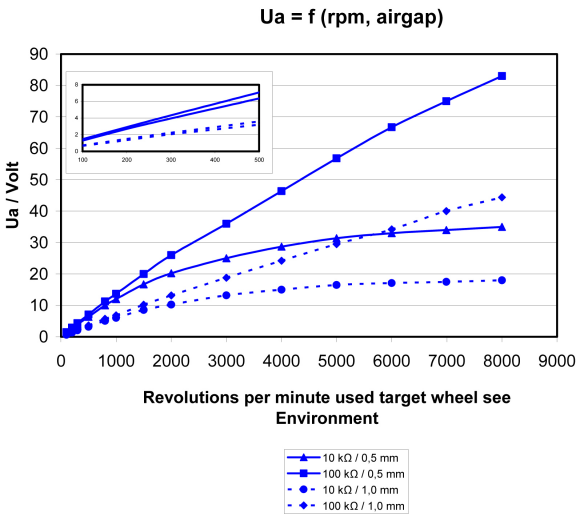
Magnetic pole	Round
Bore diameter	12.5 mm
Weight w/o wire	30 g
Installation depth L2	32.2 mm

Electrical Data

Coil resistance	1,200 Ohm
Inductance max.	400 mH
Output voltage max.	190 V_{P-P}

Environment

Target wheel diameter D	160.43 mm
Thickness t	> 5 mm
Width of teeth b1	4.1 mm
Width of gap b2	4.3 mm
Depth of teeth h1	3.5 mm
Depth of teeth h2	1.75 mm
Number of teeth	60-2



Connectors and Wires

Connector	ASL 6-06-05SN-HE
Mating connector ASL 0-06-05PN-HE	F 02U 000 237-01
Pin 1	-
Pin 2	Gnd
Pin 3	Sig
Pin 4	-
Pin 5	Scr
Various motorsport and automotive connectors are available on request.	
Sleeve	DR-25
Wire size	AWG 24
Wire length L	10 to 100 cm
Please specify the required wire length with your order.	

Installation Notes

The inductive speed sensor IA is developed for wheels made of ferro-magnetic material.

If a wheel with different dimensions is used (see Environment), the technical function has to be tested individually.

The installation depth L2 can be changed individually according to customer request.

Please contact our technical consultancy for more information.

Please find further application hints in the offer drawing at our homepage.

Safety Note

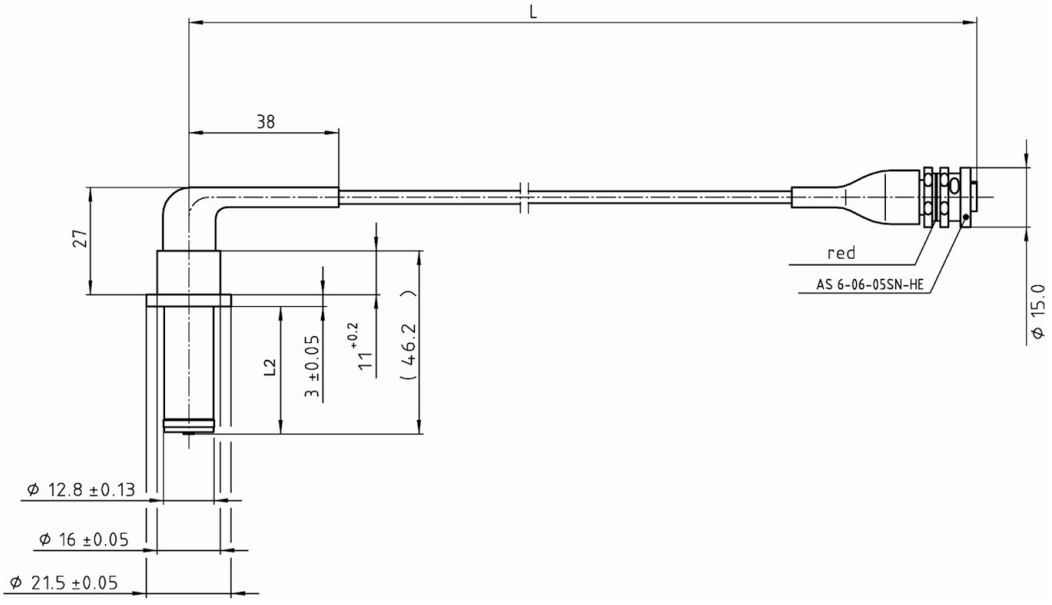
The sensor is not intended to be used for safety related applications without appropriate measures for signal validation in the application system.

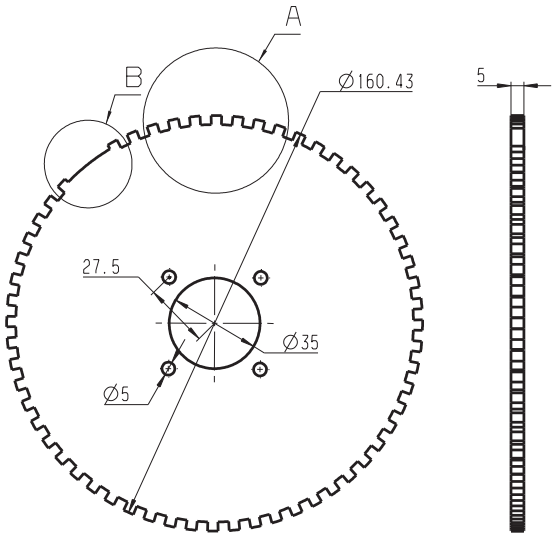
Ordering Information

Inductive Speed Sensor IA
Order number **F 02U V02 586-01**

Inductive Speed Sensor IA
Without connector
Order number **F 02U V02 586-90**

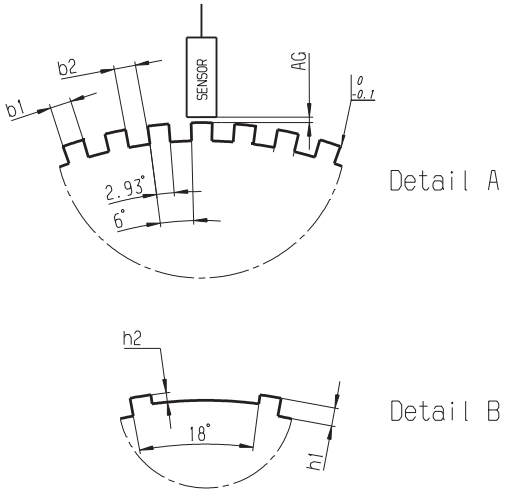
Dimensions





60-2 Teeth

Left view



Represented by:

Europe:
Bosch Engineering GmbH
Motorsport
Robert-Bosch-Allee 1
74232 Abstatt
Germany
Tel.: +49 7062 911 9101
Fax: +49 7062 911 79104
motorsport@bosch.com
www.bosch-motorsport.de

North America:
Bosch Engineering North America
Motorsport
38000 Hills Tech Drive
Farmington Hills, MI 48331-3417
United States of America
Tel.: +1 248 876 2977
Fax: +1 248 876 7373
motorsport@bosch.com
www.bosch-motorsport.com

Latin America:
Robert Bosch Ltda
Motorsport
Av Juscelino Kubitscheck de
Oliveira 11800
Zip code 81460-900
Curitiba - Parana
Brasilia
Tel.: +55 41 3341 2057
Fax: +55 41 3341 2779

Asia-Pacific:
Bosch Engineering Japan K.K.
Motorsport
18F Queen's Tower C, 2-3-5 Minato Mirai
Nishi-ku, Yokohama-shi
Kanagawa 220-6218
Japan
Tel.: +81 45 650 5610
Fax: +81 45 650 5611
www.bosch-motorsport.jp

Australia, New Zealand and South Africa:
Robert Bosch Pty. Ltd
Motorsport
1555 Centre Road
Clayton, Victoria, 3168
Australia
Tel.: +61 (3) 9541 3901
motor.sport@au.bosch.com

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